

CLAIMS

1. A vacuum pump which generates vacuum by sucking and discharging a gas with rotation of a rotor, characterized by comprising:

- an electrical equipment section for rotating the rotor;
- a stator column containing the electrical equipment section;

- a base formed integrally with the stator column; and
- a cooling water pipe buried in the wall of the stator column, and provided with a branched water inlet port and a branched water outlet port.

2. The vacuum pump according to claim 1, characterized in that each of the water inlet port and the water outlet port are branched into two branches and disposed in the base, one branch of the water inlet port and one branch of the water outlet port being communicated with the outside of the vacuum pump at the side surface of the base, and the others with the outside of the vacuum pump at the bottom surface of the base.

3. A vacuum pump which generates vacuum by sucking and discharging a gas with rotation of a rotor, characterized by comprising:

- an electrical equipment section for rotating the rotor;
- a stator column containing the electrical equipment section;

- a base formed integrally with the stator column;
- a cooling water pipe buried in the wall of the stator column; and

- a plurality of joints which are fixed to each ends of the cooling water pipe and buried in the vacuum pump flush with the external surface of the pump.

4. The vacuum pump according to claim 3, characterized in that

- the joint and the cooling water pipe are formed of the

same metal.

5. A vacuum pump which generates vacuum by sucking and discharging a gas, characterized by comprising:

- a pump case for the vacuum pump;
- a thread pump stator for supporting the pump case;
- a base for supporting the thread pump stator;
- s stator column formed integrally with the base;
- a rotor arranged so as to cover the stator column;
- rotating blades provided in multiple stages at the outer periphery of the rotor; and
- a cooling water pipe buried in the wall of the stator column.

6. The vacuum pump according to claim 5, characterized in that

- the pump case has a fastening portion which is fastened to the thread pump stator to support the pump case, and
- the thread pump stator has a flange which extends from the thread pump stator and fastens the pump case to support the pump case.

7. The vacuum pump according to claim 5, characterized in that

- An external casing of the vacuum pump is formed by the pump case, the thread pump stator, and the base.

8. The vacuum pump according to claim 5, characterized in that

- in the vacuum pump, the inner peripheral surface shape of the rotor and the outer peripheral surface shape of the stator column are different from each other.

9. The vacuum pump according to claim 5, characterized in that

- the vacuum pump further comprises a second cooling water

pipe arranged on the outer surface of the thread pump stator.

10. The vacuum pump according to claim 5, characterized in that

the vacuum pump further comprises a heater arranged on the outer surface of the thread pump stator.